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Anti-IL15 Antibody Picoband®

Catalog Number: PB9244

About IL15

Interleukin (IL)-15 is a cytokine with the ability to stimulate the proliferation activity of Th1 and/or Th2 lymphocytes. This gene is mapped to human chromosome 4q31 by fluorescence in situ hybridization. IL-15 is a novel cytokine whose effects on T-cell activation and proliferation are similar to those of interleukin-2 (IL-2), presumably because IL-15 utilizes the beta and gamma chains of the IL-2 receptor. IL-15 can play a role in the initiation and outcome of acute and chronic rejection. Anti-IL-15 therapy in combination with classic immunosuppression therapy might be beneficial in the prevention of acute, and especially chronic, allograft rejection.

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Overview

Product Name	Anti-IL15 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-IL15 Antibody Picoband® catalog # PB9244. Tested in ELISA, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P40933

Technical Details

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Immunogen	E.coli-derived human IL-15 recombinant protein (Position: N49-S162). Human IL-15 shares 70% amino acid (aa) sequence identity with both mouse and rat IL-15.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	ELISA, 0.1-0.5ug/ml, - Western blot, 0.1-0.5ug/ml, Human

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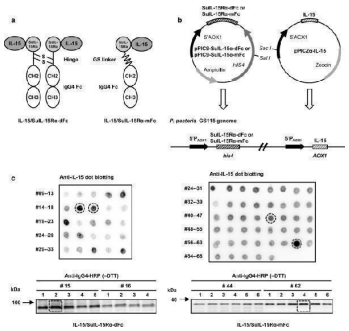
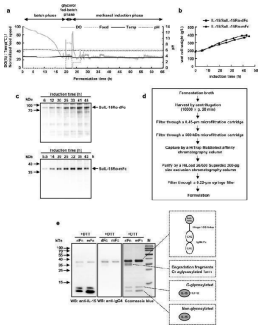
Anti-IL15 Antibody Picoband® (PB9244) Images



Anti-IL-15 antibody, PB9244, Western blottingAll lanes: Anti IL-15 (PB9244) at 0.5ug/mlWB: Recombinant Human IL-15 Protein 0.5ngPredicted bind size: 15KDObserved bind size: 15KD



Construction and expression of IL-15/SuIL-15Ralpha-dFc and IL-15/SuIL-15Ralpha-mFc. a Schematic diagram of the two IL-15/SuIL-15Ralpha-IgG4 Fc complexes. IL-15/SuIL-15Ralpha-dFc was composed of two molecules of mutated IL-15 noncovalently bound to a modified dimeric SuIL-15Ralpha-IgG4 Fc fusion protein, while IL-15/SuIL-15Ralpha-mFc consisted of a single molecule of mutated IL-15 noncovalently bound to a modified monomeric SuIL-15Ralpha-IgG4 Fc fusion protein. b The construction strategy of the two IL-15/SuIL-15Ralpha-IgG4 Fc complexes. pPIC9-SuIL-15Ralpha-dFc or pPIC9-SuIL-15Ralpha-mFc and pPICZalpha-IL-15 were inserted into the genome of GS115 through homologous recombination using the his4 and AOX1 sequences, respectively. c Screening for the expression of IL-15/SuIL-15Ralpha-dFc and IL-15/SuIL-15Ralpha-mFc. Expression clones were first screened by dot blotting using rabbit anti-human IL-15 antibody followed by donkey anti-rabbit IgG-HRP conjugate, and then high expression clones were further selected and confirmed by Western blotting under nonreducing conditions using anti-human IgG4-HRP conjugate. Clones No. 15–2 and 62–4 were selected as the expression clones used in pilot-scale fermentation of IL-15/SuIL-15Ralpha-dFc and IL-15/SuIL-15Ralpha-mFc, respectively. The numbers in the figure represent the clone numbers Index in PubMed under a CC BY license. PMID: 34107983



Pilot-scale fermentation, purification and characterization of IL-15/SuIL-15Ralpha-dFc and IL-15/SuIL-15Ralpha-mFc. a Representative three-step fermentation process, including batch phase, glycerol fed-batch phase and methanol induction phase. Parameters, such as dissolved oxygen (DO), feeding speed, temperature and pH, were monitored during fermentation. b Cell growth of the two IL-15/SuIL-15Ralpha-IgG4 Fc complex-expressing strains during fermentation was monitored and represented as wet cell weight. c The expression of the two IL-15/SuIL-15Ralpha-IgG4 Fc complexes during fermentation was analyzed by Western blotting using an anti-human IgG4-HRP conjugate under nonreducing conditions. d The downstream processing workflow of fermentation broth. e The two purified IL-15/SuIL-15Ralpha-IgG4 Fc complexes were separated by

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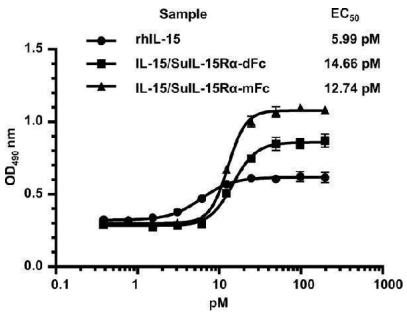
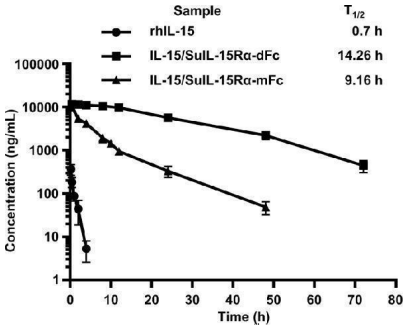
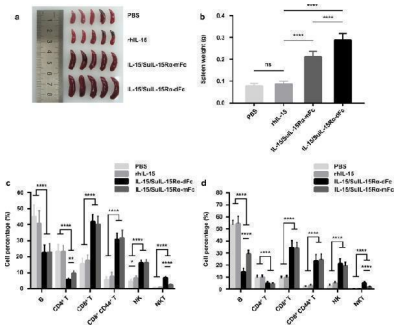
SDS-PAGE under reducing conditions and identified by Western blotting or Coomassie blue staining. The contents within the dashed boxes are the presumed protein structure of the corresponding bands. M: prestained protein marker; dFc: IL-15/SuIL-15Ralpha-dFc; mFc: IL-15/SuIL-15Ralpha-mFc Index in PubMed under a CC BY license. PMID: 34107983



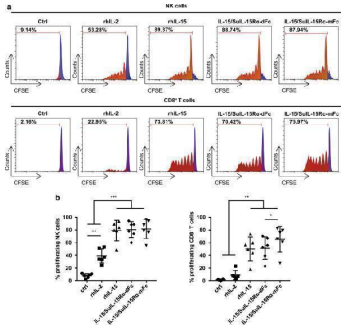
In vitro bioactivity of rhIL-15, IL-15/SuIL-15Ralpha-dFc and IL-15/SuIL-15Ralpha-mFc. A CTLL-2 cell proliferation assay was used to evaluate the biological activity of the rhIL-15 and IL-15/SuIL-15Ralpha-IgG4 Fc complexes. The EC 50 values were calculated using the four-parameter nonlinear logistic regression model. All data points are the means ± standard deviation of triplicate OD values. The results are representative of at least three experiments Index in PubMed under a CC BY license. PMID: 34107983



Pharmacokinetics analysis of rhIL-15, IL-15/SuIL-15Ralpha-dFc and IL-15/SuIL-15Ralpha-mFc. C57BL/6 J mice (male, 6–8 weeks of age, n = 4–9 for each group) were intravenously administered 0.28 mg/kg rhIL-15 or 1 mg/kg IL-15/SuIL-15Ralpha-IgG4 Fc complexes, and blood samples were collected at the indicated time points after injection. The concentration of IL-15 in serum was measured by ELISA. All data points are the means ± standard deviation of the concentrations Index in PubMed under a CC BY license. PMID: 34107983



In vivo bioactivity of rhIL-15, IL-15/SuIL-15Ralpha-dFc and IL-15/SuIL-15Ralpha-mFc. C57BL/6 J mice (male, 6–8 weeks of age, n = 10–14 for each group) were intravenously injected with PBS, 0.28 mg/kg rhIL-15 or 1 mg/kg IL-15/SuIL-15Ralpha-IgG4 Fc complexes. Seventy-two hours after treatment, spleens and blood samples were collected and prepared for flow cytometry. a Representative photo of spleens separated from each group (n = 5). b Spleen weight statistics. c The percentage of each indicated cell subset in splenocytes. d The percentage of each indicated cell subset in peripheral blood cells. The data shown in b, c, and d are combined from three independent experiments, and all data points are the means ± standard deviation. ns, not significant; *: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$ and ****: $p < 0.0001$ Index in PubMed under a CC BY license. PMID: 34107983



Effects of rhIL-2, rhIL-15, IL-15/SuIL-15Ralpha-dFc, and IL-15/SuIL-15Ralpha-mFc on NK and CD8 + T cell proliferation. Human PBMCs from healthy donors (n = 6) were cultured for 7 days in the absence or presence of 50 IU/mL rhIL-2, 10 ng/mL rhIL-15 or 35.7 ng/mL IL-15/SuIL-15Ralpha-IgG4 Fc complexes, and the proliferation of CFSE + NK cells and CFSE + CD8 + T cells was measured by flow cytometry. a Results from one representative healthy donor. b Statistics on the proliferation of NK cells or CD8 + T cells from all healthy

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donors. All data points are means ± standard deviation. *: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$ Index in PubMed under a CC BY license. PMID: 34107983

Anti-IL15 Antibody

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